

Notes on grasses.

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My recent articles on "New or Noteworthy American Grasses," published in the *Bulletin* of the Torrey Botanical Club, seem to have caused considerable consternation among the agrostologists of the Department of Agriculture at Washington, judging from the haste in which they have criticised them. This haste has evidently led them into the commission of obvious errors, which would have been avoided had more care been taken in investigating the facts.

An exception is made to my disposition of *Agrostis brevifolia* of Nuttall. I am aware that until the type of this plant can be seen, absolute certainty of identification is impossible. The character given by Nuttall, to which your correspondent alludes, "culms solid and compressed

not terete but solid and ancipital," is one which is peculiarly applicable to the plant I have referred to *Agrostis brevifolia*, and which your contributor thinks is the *Vilfa Richardsonis* of Trinius. In the plant I have referred to *Agrostis brevifolia* the culms are solid, much compressed, and even ancipital. In the type of *Vilfa cuspidata* Torr., preserved in the Columbia College Herbarium, the culm, on the contrary, is terete with the exception of a slight flattening on one side, and never approaches ancipital in any degree. If this character is to be considered as "essential and decisive," it does not argue well for the equivalency of *Agrostis brevifolia* Nutt. and *Vilfa cuspidata* Torr.

Again, a lack of research is shown by your contributor in his disposition of Steudel's *Cryptostachys vaginata*. Steudel refers to the specimen, on which he founded his monotypic genus *Cryptostachys*, in the following words: "Panicum proliferum Hrbr. Amerc. un. it. 1837."¹ There is a specimen in the Columbia College Herbarium with a printed label bearing the above quoted words, and thus evidently a duplicate of the grass Steudel had in mind; it is undoubtedly the *Vilfa vaginaeflora* Torr. Steudel, like many others, applied Torrey's name to the wrong plant. But a careful consideration

¹Syn. Pl. Gram. 181. 1855.

of the generic description given by Steudel should have availed to show that his *Cryptostachys vaginata* is *Vilfa vaginaeflora* Torr., for he says: "glumæ 2 . . . acuminatæ; valvulæ 2 membranaceæ pilosæ acuminatæ." These characters, especially the reference to the pubescence of the flowering scale (valvula), are found in *Vilfa vaginaeflora* of Torrey, and well distinguish it from my *Sporobolus neglectus*, in which the empty and flowering scales are never more than acute and perfectly glabrous. Besides the longer and relatively narrower spikelets in *V. vaginaeflora* Torr., another character serves well to distinguish these two related species. In *Sporobolus vaginaeflorus* the flowering scale in age is dull and usually mottled, while in *Sporobolus neglectus* it becomes white and shining.

The other of your correspondents seems to question the "validity" of some changes I have proposed, but he too disregards the facts. In reference to *Andropogon alopecuroides* L., it is perfectly evident that Linnaeus applied his name to a form with a twisted awn, for he uses the expression "aristis tortuosis." It makes no difference whether the twisting of the awn is of specific value or not. The only question is, to what form did Linnaeus give the name "alopecuroides." He has made himself clear on this point, as stated above. He also makes the following citation: "Andropogon culmo paniculato. Gron. virg. 133." On page 133 of Gronovius' *Flora Virginica* the above quoted words are found and appended is "Clayt. n. 601." I have been thus explicit, as a reference made by your correspondent to "Gronovius' number 133" leads me to believe that he has not investigated the matter very carefully, and the above words of explanation may help to set him right. He evidently inferred that the number 133 cited by Linnaeus referred to the number attached to some specimen. Had he looked into the subject, he would not have made this error.

In order to ascertain just what Clayton's no. 601 is, specimens of three distinct forms were sent to Mr. E. G. Baker at the British Museum, where Clayton's plants are deposited. He replied as follows: "Your no. 2 matches the Clayton type and as I thought perhaps you would like to see this for yourself I send a scrap of the type with Mr. Carruther's permission." This settled the matter conclusively. Bush's no. 160, collected in Missouri in 1893, and Kearney's no. 385,

collected in southeastern Kentucky in 1893, belong here. Whether the *Erianthus saccharoides* of Michaux is the same or not must remain doubtful until his type is seen.

As to the separation of *Panicum* into a number of genera, this of course must be a matter of individual opinion. If it can be divided into groups, why not call these groups genera? At all events consistency should be used in the treatment of the subject. If it is thought best to make one vast genus out of all these related groups, it would seem better not to draw any arbitrary lines. Why should not *Paspalum* be included also, as it approaches *Eupanicum* as closely as does *Syntherisma*? How large is to be this aggregation? Cannot *Eriochloa*, *Anthaenantia*, *Oplismenus*, *Ixophorus*, *Pennisetum*, etc., come in with equal propriety?

Nothing new is added by your contributor to the argument in reference to *Panicum latifolium* L. As the matter has been referred to, it may be well to call attention to the work of Doell, for whose judgment your correspondent seems to have respect, as evidenced by his remarks in relation to *Syntherisma*. Doell² has applied the Linnaean name *latifolium* to the tropical plant, and cites *P. divaricatum* L. as a synonym. Among the synonymy, and heading the list, will be found *Bambosulus latifolius* Sloane, *Voy. pl.* 71. *fig.* 3. As Linnaeus refers to this same figure³ it is not difficult to understand what he had in mind and whence he derived the name *latifolium*. If Linnaeus had in his possession, at the time of the publication of his first edition of the species *Plantarum*, the plant which Munro says is attached to the sheet bearing the tropical plant, would he not have referred to it in some way? Linnaeus simply says: "Habitat in America." Under *P. clandestinum*, published on the same page, he distinctly states that he had that plant from Kalm. Is it not clear that he received from Kalm, after the publication of his first edition, the plant which Munro says was ticketed, "From Kalm, North America?" At Kew the name has been applied to the tropical plant, as shown by a number of specimens in the Columbia College Herbarium determined by Prof. D. Oliver; among them nos. 2,053 and 3,593, Jenman, from British Guiana.

Your contributor says that my *Panicum boreale* is a form of

² *Mart. Fl. Bras.* 2²: 206. 1877.

³ *Sp. Pl.* 59. 1753.

P. dichotomum, and may be separated as a variety of it. It is evident he has never seen the plant growing or he would hardly make this statement. Its habit is not that of *P. dichotomum*, but more that of *P. laxiflorum* Lam., from which it is abundantly distinct, both in technical characters and range. *P. laxiflorum*, so far as I am aware, does not occur north of Maryland. *P. boreale*, on the other hand, is a northern species, extending along the northern border of the United States. I have seen specimens from Newfoundland, Maine, Ontario, New York and Minnesota. It was collected by the writer at Cairo, in the Catskill Mts., N. Y., in 1893. It was quite plentiful there, and it was from field observations that my attention was called to its specific differences. The *P. laxiflorum* of Rand and Redfield's Flora of Mt. Desert (p. 175) belongs here.

The comments made on my disposition of *P. capillare* var. *minor* Muhl. are open to the same criticism made above in relation to *P. boreale*; your contributor is evidently not familiar with the plant as it occurs in the field. It is certainly as worthy of specific rank as *P. flexile* (Gatting.) Scribn. Are all these well-marked forms to be combined and this aggregation called a species? I will acknowledge this is an easy way to dispose of the matter, and entails little work on the author, but to those using the resulting work it is a constant source of confusion and disappointment.

Now as to the *Ixophorus* of Schlechtendal. Hackel⁴ recognizes it, as being equivalent to *Setaria*, in the following words: "*Ixophorus* Schlecht. ist eine einborstige *Setaria*." In the "True Grasses" of Scribner and Southworth, a translation of the above quoted words occurs and no comments are added, although comments do occur in other parts of the same work. Evidently the authors were satisfied with this disposition of it. Nor are the above parties alone in this treatment of the case. In the Index Kewensis the same view is maintained. Hemsley⁵ gives, as synonyms of *Setaria unisetata*, *Urochloa unisetata* Presl. and *Ixophorus unisetatus* Schlecht.

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⁴ Eng. und Prantl, Nat. Planz.-Fam. 7: 36. 1887.

⁵ Biol. Cent.-Amer. 3: 506.